Airborne High Resolution Infrared Spectroscopy of Western Wildfires

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in August 1994 the Airborne Emission Spectrometer was used to obtain high resolution (0.07 cm^{-1}) infrared spectra of a forest fire in northern Oregon and a brushfire in central California (San Luis Obispo) from the NASA DC8 aircraft flying at an altitude of 11km.

Both measurement series were opportunistic. **Therefore,** the instrument and experimental plan were not- optimized for these observations. However, we have been able to derive flame temperature, smoke/gas plume temperature, wind speed, wind direction and column densities for CO, CO_2, H_2O and NH_3. Other species are being sought but there are a number of unidentified features in the spectra that have so far defied interpretation.

Using these data and similar future observations (preferably with ground truth and/or correlative measurements), we hope to develop a retrieval method that will be applicable to space-based remote sensing of biomass burning episodes.

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Presentation Preference:
Poster

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NOTE:
R. Beer has applied for AGU membership but it will not become effective until Jan 1 1995